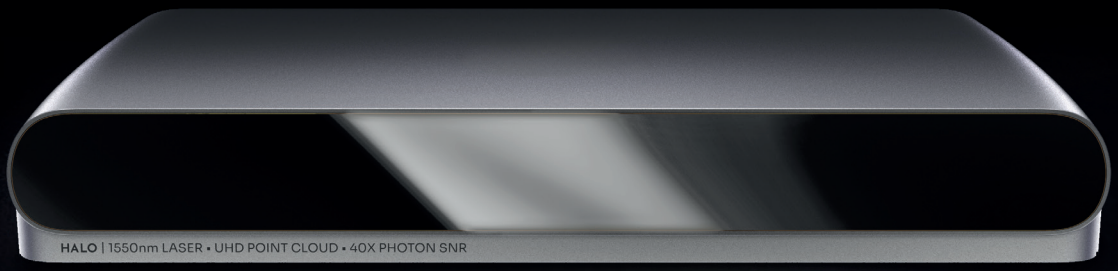


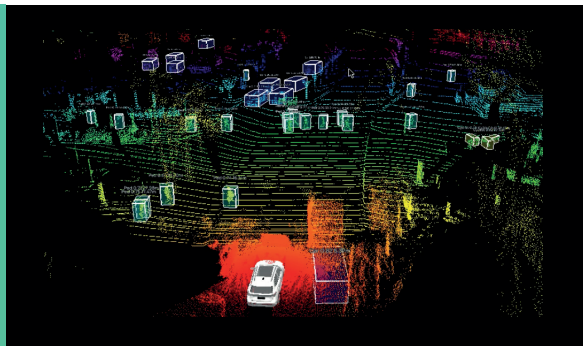
HALO

High Performance. Ultra Thin.

MicroVision's Halo sensor is engineered to deliver breakthrough performance, streamlined integration, and scalable production suitable for passenger commercial vehicles and industrial applications. Designed from the chip level up, Halo combines ultra-thin form factor with industry-leading sensing capabilities to enhance safety and advance assisted-driving features. Its compact architecture enables seamless integration while maintaining high precision in a wide range of environmental conditions.

Key Features

- Ultra-thin design and lightweight construction for flexible and seamless integration.
- Long-Range, High-Resolution Sensing: high point density and superior object detection performance.
- 1550 nm Laser Technology enables enhanced range capability (>300m).
- Low Power Consumption (~20 W)
- Production-Ready Architecture: optimized for scalable, high-volume manufacturing.



Performance Features	Specifications
Maximum Instrumented Range	312 m
Minimum Instrumented Range	0.5 m (existence indicator < 0.5 m)
Radiometry (10% Lambertian ref, >90% PoD, FAR 0.1%)	200 m
Field of View (H x V)	120° x 39° (full radiometry +10°/-16°) *
Typical Horizontal Point Spacing	0.12° *
Typical Vertical Point Spacing	0.05° *
Range Precision (1σ, 50 m, 10% R)	< 3 cm
Number of Returns	Up to 3
Frame Rate	1 Hz – 30 Hz *

MicroVision®

Technical Data

Laser	Specifications
Laser Product Class	Class 1 per IEC / EN 60825-1: 2014
Laser Wavelength	1550 nm

Lidar Output	Specifications
Communications Network	1000BASE-T1; 1000BASE-T **
Data Protocol	User Datagram Protocol (UDP)
Control Protocol	SOME / IP
Diagnostic Protocol	DoIP
Synchronization	gPTP (IEEE 802.1AS)

Control and Data Interface	Specifications
Connector	E6S1LU-40MT5-Z
Mating Connector	E6K14M-1CAZ5-Y
Power Consumption	20 W Nominal at Room Temp
Operating Voltage	9-16 V DC

Mechanical/Electrical	Specifications
Dimensions (w, d, h) without mounting brackets	180 mm x 110 mm x 25 mm
Sensor Mass	0.75 kg

Operational	Specifications
Operating Temperature (nominal performance)	-40° to 85° C (case)
Storage Temperature	-40° to 105° C
Ingress Protection	IP67 housing + IP69K window

* FoV, resolution, and frame rate are software defined within and between frames
** Automotive and non-automotive hardware variants

Technology & Innovation

Long Range


Compact Design


High resolution


Robust Sensor


Low Latency

MicroVision®